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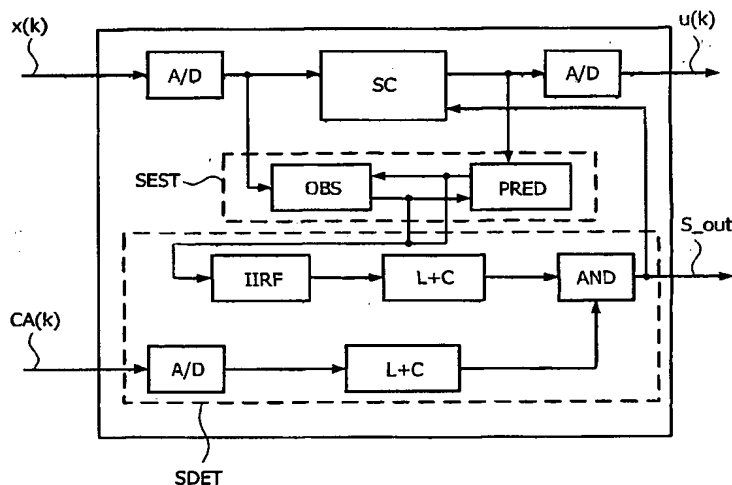
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(54) Title: **ANTI-SHOCK OPTICAL RECORDING AND REPRODUCING DEVICE**



(57) Abstract: The present invention relates to an optical recording and reproducing device comprising an optical pick-up unit, position means for moving roughly the optical pick-up unit with respect to a desired position on an optical disc, an actuator for moving the optical pick-up unit relative to the position means in a radial direction of the optical disc, and a servo processor for delivering a control signal ( $u(k)$ ) from a measured radial error signal ( $x(k)$ ) derived from the optical pick-up unit. Said servo processor further comprises: - a state estimator (SEST) for delivering an estimated radial error signal ( $\hat{x}(k)$ ) and a predicted radial error signal ( $\hat{x}(k)$ ) on the basis of the measured radial error signal ( $x(k)$ ) and of the control signal ( $u(k)$ ); and - a shock detector (SDET) for delivering a shock indication ( $S_{out}$ ) on the basis of the estimated radial error signal, of the predicted radial error signal, and of a sum ( $CA(k)$ ) of the signals delivered by the at least two regions of the optical sensor.



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